



Overview

- The challenge
- ZEV program history & technology story
- The 2003 regulation
- ARB's role in bringing ZEVs to commercialization
- Section 177 States
- Next steps
- Conclusion





Next Steps

- Rulemaking status
- September 2003 Board issues
- Northeast states





Rulemaking Status

- Litigation settled
- 2003 rulemaking package due to Office of Administrative Law by January 10, 2003
- On track for 2005 implementation
- Independent Expert Review Panel will assess technology status and inform future Board review





September 2003 Board Issues

- ZEV credits for supplementary activities
 - Stationary fuel cells
 - Transportation systems
 - Hydrogen infrastructure





Stationary Fuel Cells

| Parameter | Impact |
|-------------------------------|------------------|
| Component Development | Positive |
| Cost Reduction | Slight Positive |
| Service Life Information | Positive |
| Fuel Cell Industry | Undetermined |
| Number of ZEVs Produced | Negative |
| Precedent for other ARB Motor | Potentially Very |
| Vehicle Regulations | Negative |



Neutral impacts:

Fuel cell assembly automation, Vehicle integration, Service conditions,
 Infrastructure, Codes and standards





Hydrogen Infrastructure

- Infrastructure critical to successful ZEV program
- Energy providers best fit
- Cleans Fuels Outlet program already requires station deployment
- California Fuel Cell Partnership is already engaged on fueling interfaces, codes and standards







Transportation Systems

- NEVs provide value to transportation systems
- Transportation system credits in alternative compliance path
- Explore credits for taxis and shuttles linked to transit centers
- Use ARB, CEC & Caltrans agreement to foster transportation system projects









Summary of Staff Review

| Topic | Action |
|----------------------------|--|
| Stationary fuel cells | Hesitant to recommend credits If credits: AT PZEV, capped, sunset, California only |
| Hydrogen Infrastructure | No ZEV credit |
| Transportation systems | Transportation System Credits for NEVs Allow Alternative Compliance Path for non-NEVs |





Board Response

- Board statements
 - Consider incentives for projects that combine fuel cells, infrastructure, and transportation
 - Consider providing limited ZEV credit or other incentive
 - Continue to explore regulatory options
- Board took no official action
- Timing of staff followup to be determined





Northeast States

 Northeast states will update their regulations to reflect 2003 CA changes